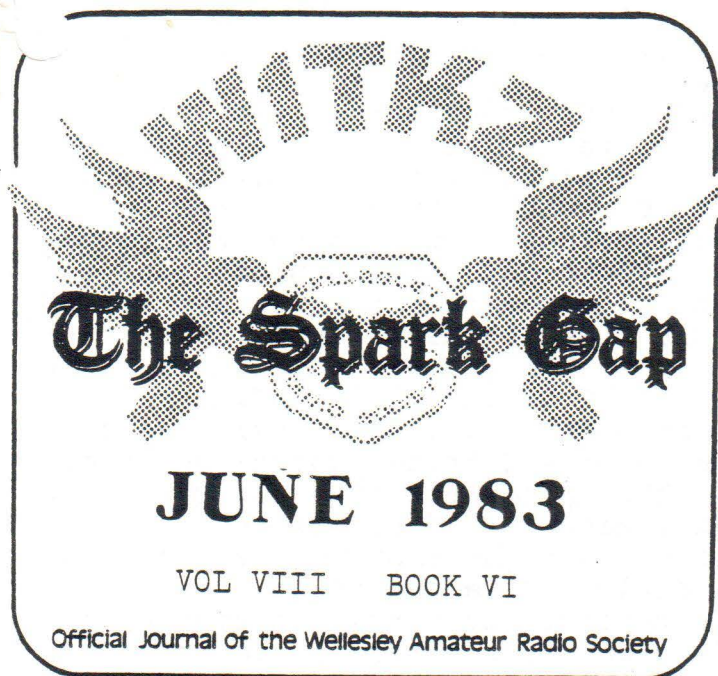




STATION ACTIVITIES

Field Day this year will see the Wellesley Amateur Radio Society return to the Wellesley Town Hall where we operated from successfully last June.

We intend to operate about the same as last year, with two stations on whatever bands are most favorable for the time of day and operators switching on and off as desired. No formal schedules here, so if you find you have some free time between Saturday morning and Sunday afternoon, June 25 and 26, stop by and lend a hand. There will of course be a group of diehards who will stay right from set up to break down, and if you would like to join them, please do.

We have arranged with the Wellesley Fire Department to provide a truck to help put the tower up and this year we have also arranged for them to come back and take it down! This is quite an operation to see, so you might want to stop by either around noon on Saturday or 2:00 p.m. on Sunday.

Field Day is a lot of fun, and of

course is also an opportunity to test out our emergency preparedness so we can be ready in case we are needed, like some of our fellow hams in California have been recently due to the earthquake. Plan on stopping at the Wellesley Town Hall sometime during the weekend of June 25 and 26.

Our other major activity for the month of June is the VHF QSO Party, where we will once again travel to Mt. Equinox in Vermont for a weekend in the clouds.

This year's contest is the weekend of June 11 and 12, with some people arriving as early as Friday night and leaving Monday morning. We have some new and improved equipment this year and hope to break into the top ten multi-operator stations nationwide.

If you want a chance to try out some of the "exotic" higher bands this is it. We can always use more operators and would love to let more people in on these bands that most are not equipped for at home.

For accommodations, we have reserved a room in the hotel on the mountaintop where most of us sleep on the floor to save expenses. If you would like to get in on this, contact Erik Thoresen, KLOGF. It is also possible to camp where we set up the stations.

Though this is a fairly long trip, please consider coming up this year. An interesting time is guaranteed.

ANNOUNCEMENT

Please note that our meeting this month and from now on will be held at our new home in the Wellesley Red Cross chapter house, 211 Washington Street, Wellesley Hills. This building is located on Route 16 right at the intersection of Route 9, and shares a parking lot with the First Congregational Church where our auction was held. See you there June 2.

MEETINGS THIS MONTH:

June 2, 1983, 7:30 p.m. at Red Cross, 211 Washington Street.
June 16, 1983, 7:30 p.m. at Wellesley Central Telephone Office

OFFICIAL BULLETIN

Number 30, dated April 18, 1983:

Astronaut Owen Garriott, W5LFL will operate an Amateur Radio station aboard the next Space Shuttle mission, scheduled for September 1983. On April 16, NASA officially approved a joint ARRL/AMSAT proposal to include an Amateur station aboard the STS 9/Spacelab flight. The joint ARRL/AMSAT proposal calls for ARRL to furnish the special Amateur Radio equipment for use on the shuttle, and to organize and coach Amateurs in procedures for rapid and efficient communications with the shuttle. This operation, which will be on 2 meter FM, will mark the first time in the history of space exploration that the general public will be able to communicate directly with an astronaut in space. Details will be forthcoming in QST.

Number 31, dated April 20, 1983:

On April 15 the FCC released a Public Notice updating the Amateur Radio Station Call Sign Assignment System. The Notice says the Commission does not intend to reissue unassigned call signs in the foreseeable future. It extends to two years the time in which an expired call sign can be renewed, and during which an expired secondary call sign can be transferred to a primary license. Finally, it sets forth a new prefix block for Desecheo Island which is now KP5.

Number 33, dated April 23, 1983:

The ARRL Board of Directors met in Hartford, Conn., April 21 and 22. The Board, after extensive discussion, considering the overwhelming opposition of League members to the no code license, and finding little evidence that the requirement for a knowledge of Morse code is a significant barrier to entry into Amateur Radio, unanimously voted to file comments with FCC opposing in the strongest possible manner the creation of an Amateur li-

cense class that does not require demonstration of knowledge of the Morse code.

In other regulatory matters, the Board directed that favorable comments be filed in the FCC proposal to establish 10 year license terms and 2 year grace periods. The board reaffirmed its support of the HF phone band expansion proposed by FCC for the 80, 15 and 10 meter bands which is consistent with the ARRL proposal as outlined on page 51 of October 1982 QST.

The Board approved a revitalization plan for the Intruder Watch and adopted the recommendation of the VRAC that 2 meter splinter repeater channels be upright east of the continental divide to be phased in over a five year period. It was voted that Memorandums of Understanding be effected between the League and the National Communications System and REACT International respectively.

Plans were approved for a more continuous Washington, D.C. presence and for the eventual autonomy of the CRRJ. An ARRL Scholarship Endowment fund honoring Senator Barry M. Goldwater, K7UGA was established.

A pilot program to hold general ARRL membership meetings at the 1983 and 1984 ARRL National Conventions was adopted. Directors Grauer, Holladay, Milius and Nathanson were elected to the ARRL Executive Committee.

OFFICERS

PRESIDENT:

David Curry, K1TK, 237-2450

VICE PRESIDENT:

Roger Smith, WLEOA, 235-6239

RECORDING SECRETARY:

Nels Anderson, K1UR, 872-5259

CORRESPONDING SECRETARY:

Skid Schermerhorn, W1TTY, 235-1987

TREASURER:

C.J. McDonald, WB1BUM, 332-6091

FUND RAISING:

Kevin Kelly, W4YHV, 242-0341

OPERATING ACTIVITIES:

Erik Thoresen, K1OGF, 655-7048

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society



EDITOR:

NELS ANDERSON, KIUR
92 BISHOP DRIVE
FRAMINGHAM, MASS. 01701
872-5259

THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, FCC RULES AND REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SEND THEIR ARTICLES TO THE EDITOR. ITEMS PRINTED IN THE "SPARK GAP" MAY BE REPRINTED BY OTHER AMATEUR RADIO PUBLICATIONS PROVIDED THE AUTHOR AND THE "SPARK GAP" ARE GIVEN CREDIT.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS \$8.00. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
211 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181



Minutes

Meeting of April 21, 1983:

The meeting was opened at 7:45 p.m. by President David Curry, K1TK, with about ten present.

The secretary's report was read.

The treasurer's report was read, including the final results of the auction.

Field Day was discussed. After considering the sites that had been proposed, it was decided to return to Wellesley Town Hall for Field Day weekend, June 25-26. Arrangements for the site will be made, and we will try

to get the fire truck to help with the antennas again.

It was announced that our request for space at the Wellesley Red Cross had been granted. We will now continue selling off our surplus items and hold our first moving party May 8.

Dick Paret, W1ZLQ, announced a number of upcoming public service events, and requested help for them.

Dick also lead a review of our operation during the Boston Marathon. The BAA and everyone else we were involved with were generally pleased with our efforts.

The meeting was closed at 9:27 p.m.

Meeting of May 19, 1983:

The meeting was opened at 7:48 p.m. by Vice President Roger Smith, W1EOA.

The Secretary's report was read.

Plans for the new club headquarters were discussed. Some painting and other work is needed.

We have secured a room on Mt. Equinox for the VHF contest.

The Treasurer's report was given, including an accounting of the proceeds from sales of club equipment at the Hosstrader's swapfest.

It was announced that we have already been asked to help again with the Veteran's Parade in October.

Erik Thoresen, K1OGF, gave a report on the VHF Conference held the previous weekend in Nashua, N.H.

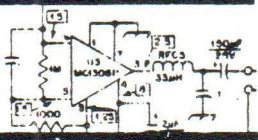
Mort Cohan, K1IU, has been appointed to the office of Eastern Massachusetts Section Technical Coordinator. He reported on two technical nets that have recently started. One is an OSCAR net held at 8:00 p.m. Wednesdays on Marlboro 146.01/61 and the other is a packet radio net held Thursdays on Billerica 147.72/12.

Dick Paret, W1ZLQ, mentioned that we would like someone to donate a rug and some shades for the new club room.

The election of officers was held. Since no offices were contested, a simple approval of the slate by hand vote was held, and the slate was approved.

The meeting was closed at 8:17 p.m.

Tek Tek



by Nels Anderson, KLUR

Instead of buying a new rubber duck when your current HT antenna wears out you can make your own quarter wave whip which in addition to being easy to build will give you some additional gain.

The parts you will need are a BNC connector like your current antenna uses, a collapsable rod antenna such as used in rabbit ears on a television, and some heat shrink tubing, or something similar to insulate the rod from the grounded portion of the BNC connector.

The rod I used is Radio Shack model 15-232 which happens to come in a very convenient size. On this rod the top three sections are 18.5 inches, two sections are 12.5 inches and one section is 6.25 inches which are very close to a quarter wavelength on 146, 220 and 450 MHz respectively. Thus, by using one, two or three sections the same antenna can be used on three bands.

Several additional sections had to be removed to get the rod to length. To do this, fully extend the rod, measure back the required length (19 inches on two meters) and cut one section beyond this length with a hack saw, razer saw, or whatever you have that will cut metal. Then push the rod in until the tabs that keep the sections from separating can be removed, and after sliding it apart, you will have a clean end which in the case of the Radio Shack rod had a nice hole into which is soldered a piece of wire about one inch long which will be soldered to the center pin of the BNC connector.

Once the wire is soldered in, cover the bottom half inch or so of the rod with heat shrink tubing, tape, or anything else that will insulate it

from the case of the coax connector. Put enough thickness on so that it will be tight inside the connector. Now trim back the wire you soldered to the rod end to about one quarter inch (the exact length should be determined by trial and error until the connector center pin goes in properly). Solder the pin to the wire, assemble the connector and you have your antenna.

Hereabouts...

Since we are moving to new quarters, we are taking advantage of this opportunity to clear out some of the excess equipment, parts, etc. (mostly etc.) that has been accumulated at the club over the years. If you are interested in examining what we have and possibly purchasing anything, come to one of the June meetings and we will open up all the rooms.

We are also planning on disposing of the station console that was built some years ago as it is felt it does not really meet our needs. This console is sturdily built but would need some repair on the portion where your equipment would be mounted, mostly for cosmetic reasons. The console is also fairly large. If you are interested in purchasing this item, please come to one of the June meetings or contact one of the club officers.

THE WESTLINK REPORT

THE AMATEUR RADIO NEWSLETTER

CB radio has been delicensed. The FCC acted on April 27th to drop the license requirement, permitting any resident to operate "under blanket authority" on the 27 MHz Citizens Radio spectrum. The Commission will retain the power to enforce Part 95 of its rules including the imposition of fines or other administrative sanctions against violators. The FCC estimates that this action will save it over \$500 thousand annually in administrative costs.

Westlink Report, May 6, 1983

Teleconference Radio Net

by Dave Meldrum, KALMI

Thousands of Radio Amateurs tuned in last year to the Teleconference Radio Net, a teleconference interconnection of Amateur Radio VHF repeaters across the U.S. which enables two way contact between speakers and listeners. This is the largest and most widespread interconnection of radio repeaters in the world.

The net was organized last year by the Honeywell Amateur Radio clubs of Minneapolis, Phoenix, and Billerica, Massachusetts, under the direction of Rick Whiting, W0TN, who is currently working on transmission alternatives for Honeywell's full motion video teleconferencing pilot project. The idea was derived from Ed Pillar, W2KPQ, a ham from Long Island, New York, who is involved in personal education through radio.

In the last year there have been talks on video teleconferencing, tropospheric radio propagation, laser technology, Local Area Networks, and AMTOR (an error-free method of radio teletype transmission). In March, 1983, Vic Clark, W4KFC, president of the ARRL, discussed "The Future of Amateur Radio."

"The Teleconference Radio Net (TRN) itself is a peep into the future," as Whiting, the national net manager and net control operator of the TRN, explains. "The TRN demonstrates both the power of advanced multipoint teleconferencing capable of reaching people wherever they are and the technical sophistication of ham radio. Participants will be using radio stations at home, in the car, or while walking down the street with hand-held radios. Such ubiquity will not be available to the public for several years pending construction and growth of cellular radio service in the U.S. Thus, the TRN provides a glimpse of the future in public communications." It's hard to grasp the incredible number of hams

listening in, but as ARRL President Vic Clark, said "I continue to be astonished at the number of people who were listening that evening. I attended the Roanoke Division Convention and many people dropped by the ARRL booth indicating they had been tuned in and all expressed their approval of the exercise. One fellow told me he listened while soaking in a hot tub; another while taking his children to a pizza parlor in Atlanta.

All this is possible via a multipoint teleconference bridge, which in this case is a 20-port Darome model 2020. Indeed, the plan for the June TRN is to connect two bridges (one owned by Honeywell and the other provided by Darome) in tandem to nearly double the number of radio repeaters that can be interconnected.

The Darome model 2020 bridge allows each repeater site to place a telephone call into the bridge. In operation, each telephone line (called a "port") is scanned at a rate exceeding the syllabic rate of normal speech. When a voice signal is detected on a line, that line is instantaneously connected to send the incoming voice signal out on all other lines. This voice gating technique prevents noise from all locations from being added into the net. In addition, compression amplifiers on all lines equalize the audio level for all locations.

Earlier attempts to interconnect radio repeater stations using bridging without these features were extremely noisy and had poor audio.

The technical problems in such a large interconnect are challenging, but the 'sociological' problems of managing up to 76 repeaters, each with as many as 1000 Amateurs in full two way contact, are even more challenging.

Another interesting aspect to TRN is how many volunteers put in their time and money to make the TRN possible. In addition to securing speakers, arranging publicity and administration of the net, approximately 80 clubs and organizations provide re-

peaters, local net control operators, and pay for the long distance phone call to Minneapolis.

Teleconference Radio Nets will be held quarterly in 1983. On Thursday, June 2, at 8:30 p.m. Joe Riesert, W1JR, a principal engineer at Wang Labs, will talk about "Antenna and Antenna Systems: Where is the State of the Art Going?" and will be moderated by Dave Meldrum, K1MI, in Billerica. On September 1, U.S. Senator Barry Goldwater, K7UGA, will be guest speaker on the TRN originating from Phoenix. Vern Riportella, WA2LQQ, will speak on AMSAT in December.

All stations are welcome to participate in the net either by checking in fifteen minutes before the national net starts or by just listening. It is not necessary to check into the net to ask questions, but due to the very large number of people participating only a few questions will be possible at each location. In the Boston area you may participate in the Teleconference Radio Net on the Billerica 147.72/12 repeater, or you may listen to the Sharon 146.265/865 repeater which will be retransmitting the signal from Billerica.

For more information, contact Rick Whiting, W0TN, or Dave meldrum, K1MI, at 671-3044.



Tubes: Erik Thoresen, K1OGF, has a large collection of tubes available, free to club members, small fee to others. See him at club meetings with your list.

For Sale: Model ASR32 Teletype with stand. Asking \$125. Contact Bob Woodbury, K1ZL, at 785-1423.

For Sale: Icom IC720A transceiver, with CW filter, microphone, but no AC power supply. \$800. Also, Drake TR7

transceiver with SSB and CW filters fan, external VFO, MF7 speaker. \$900. Also, Ten Tec Omni B analog transceiver with CW filter and power supply. \$500. Contact Art Swanson, K1YF, 14 Wyman Road, Cambridge, or 492-5231.

REMINDER

Just a reminder that we are still trying to gather ARRL membership numbers in order to apply for Special Service Club status. We presently have about half the amount that we need, so we still need a response from the rest of you.

When you get your next issue of QST, please either send me the label or phone me with the number. My address is Nels Anderson, K1UR, 92 Bishop Drive, Framingham, Mass. 01701 and phone is 872-5259.

Auctions / Flea Markets

July 16: New Hampshire FM Association flea market, at the Manchester, NH airport. Opens at 9:00 a.m. Admission is \$1.00 for buyers and \$5.00 for sellers. Talk in on 146.52.

October 8: Fall Hosstraders swapfest, held at the Deerfield, NH fairgrounds.

HOSSTRADERS

by Nels Anderson, K1UR

Where were you on Saturday, May 7? If you weren't at the Hosstrader's swapfest in Deerfield, NH, you missed the best chance of the year to buy, sell, or trade equipment not to mention the chance to meet several thousand fellow hams.

As in past years, the Wellesley Amateur Radio Society was well represented, with our own area staked out in the middle of the fairgrounds. This year we had two van-loads of equipment from the club basement which was for sale in an effort to clean out before we have to move. We ended up

selling most of it (and in so doing helped the club treasury) and disposed of the rest in the freebie pile at the end of the day. Our club basement is now probably close to a ton lighter than it was before!

There were also plenty of bargains to be found, and most club members picked up something or other to take home.

If you missed it, you still have another chance this year as a second Hosstrader's is now scheduled for October 8th. Even if you don't plan on buying something it's a lot of fun meeting other hams and looking at some of the strangest equipment you're likely to see, and more of it than you're likely to see anywhere else in New England.

CHUCKLE KORN-LR

EARLY PREDECESSORS TO MORSE

from GEARVAKf Bulletin, via ARNS

Old timer Elmer Grunt lectured on the 26-dit code system last week at the Traditionalist Radio Amateur Program Class "C" license class. Grunt explained to the students that early radio operators did not immediately adopt the Morse code, but first used the 26-dit code instead for many years. In the 26-dit code, each letter of the alphabet was assigned a corresponding number of dits. That is, A=. B=.. C=... and so on. "Although popular," Grunt said, "the 26-dit code was somewhat cumbersome." Grunt went on to tell the class how the 26-dit code was replaced by the "Dit and Space" code in 1879. This code system was different in that it required a maximum of only 13 dits to form a character. These dits were used in combination with 13 spaces which were performed in the carrier-off or key-up mode. Finally, before the turn of the century, another code system, the "No-dit, All-Space" code was briefly tried. It was the simplest of all as it required no dits. All char-

acters were formed in the key-up mode. In fact, no key was necessary. Unfortunately, this code, while using very little spectrum space, was very difficult to copy and never gained acceptance among hams of the day. Still, now and then on straight key night, one is likely to hear an old timer like Elmer Grunt get on the air with the 26-dit code, the Dit and Space code or the No-dit, All Space code.

THE WESTLINK REPORT

THE AMATEUR RADIO NEWSLETTER

Two high speed telegraph operators attained 68 wpm attempting to set a new world's record in copying Morse at the recent Dayton Hamvention. While failing to reach the 72 wpm mark, Extra Class licensee Bill Ehrreich, N3CL, of Atlanta, Georgia and General Class holder Phil Tuvera, KA2CLF, of Jersey City, New Jersey, proved that not all Amateurs have lost interest in the code.

Westlink Report, May 6, 1983

"New Tickets"



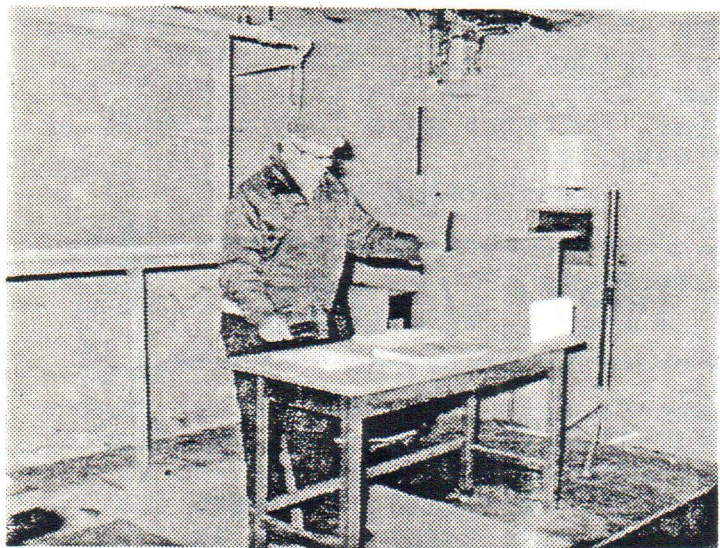
George Knight writes from Winter Haven, Florida, that he has finally obtained his Novice license and is now on the air as KB4ELJ. He asks that if anyone up here hears him to be sure to give a call. Congratulations, George, and have a great time on the air.

Hearabouts....

Instead of a speaker this month, on June 16 we will have a tour of the Wellesley Central Telephone Office, given by Hank Lysaght who spoke several months ago on the phone company's use of fiber optics. This will give us a chance to see the latest in land-line communications. We will not meet at the club but instead meet right at the Telephone office on Washington Street. Plan on being there by 7:30 p.m.

THE END OF AN ERA

The May 19 club meeting saw the last official use of our club room at 324 Washington Street. As you all know by now, the town of Wellesley has officially closed the Intermediate Building, forcing us to move out; we are, in fact, the last remaining tenant. This building, although certainly not beautiful, has served us well for some 6 or 7 years now, since we moved from the basement of the Wellesley Hills Library. We have held well over one hundred club meetings, many licensing classes, executive meetings, etc. during that time.



Vice President Roger Smith, WLEOA gavels closed the last meeting at the Intermediate Building.

It's the end of an era, but the start of a new one. Our new home in the Wellesley Red Cross Chapter will provide us with a smaller, but much nicer meeting room. In addition, we will have a room all to ourselves for our library, some equipment, and possibly a station sometime in the future. This new quarters should certainly suite our needs well in the future.

Come down and see our new home. The first meeting held here will be on

June 2 and will be the only meeting of the month. See you at 211 Washington Street, Thursday, June 2, at 7:30 p.m. for the grand opening.

EVENTS

This will be the last issue of the Spark Gap until next fall. We will hold several meetings in the summer in addition to the June ones. The dates are July 21 and August 18.

It Seems to Me...

Time is running out to send your comments to the FCC on the no-code license proposal. You have only to the end of the month to get your comments in. As you should be aware, this is one of the most important proposals that the FCC has come up with recently and should not be let pass without any feedback.

THE WESTLINK REPORT THE AMATEUR RADIO NEWSLETTER

The scheduled early June launch of the Phase III-B satellite will be delayed once more--this time for anywhere between one week and two months, according to word from AMSAT. There are two problems that the European Space Agency wants to solve to ensure a safe launch of the Ariane L-6 booster. One is with a computer system, while the other is the ongoing anomaly with the third stage cryogenic booster engine. Word of the delay was passed to AMSAT by the Phase III-B Launch Crew, which is currently at the ESA Launch Facility in French Guiana.

Westlink Report, May 6, 1983

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The first experiment using volunteers to test Amateurs was proclaimed a "success" by FCC officials. At the recent Dayton Hamvention 484 applicants were given 683 Amateur examinations with only one FCC examiner supervising, but with two groups of volunteers from the Dayton Amateur Radio Association.

Westlink Report, May 20, 1983